

IMM - DTU

02405 Probability

2004-4-11

BFN/bfn

Question a)

$$P(W + X > Y + Z + 1)$$

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$$P(W + X > Y + Z + 1) = P(W + X - Y - Z > 1)$$

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$$Var(3Z - 2X + Y + 15)$$

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since X, Y, Z are independent and standard normal variables.

$$SD(3Z - 2X + Y + 15) = \sqrt{Var(3Z - 2X + Y + 15)} = \sqrt{14}$$